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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,246	12/02/2003	Martin Obel	P03,0504	3533

7590 05/03/2006

SCHIFF HARDIN & WAITE

Patent Department
6600 Sears Tower
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Chicago, IL 60606

EXAMINER

FAULCON JR, LENWOOD

ART UNIT	PAPER NUMBER
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3762

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/726,246

Applicant(s)

OBEL, MARTIN

Examiner

Lenwood Faulcon, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 2 lines 21-24 and page 3 lines 1-3, filed February 6, 2006, with respect to the rejection(s) of claim(s) 1 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the Lu reference.

Examiner acknowledges that although the Brownlee et al. reference broadly teaches of dual chamber pacing, it does not specifically teach of biventricular pacing; however, Examiner takes the position that it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Brownlee et al. to include biventricular pacing, since it is well known in the art that biventricular pacing provides effective and efficient cardiac pacing, as taught by Lu.

In regards to claim 2, Examiner takes the position that the sensing electrode disclosed by the Brownlee et al. reference is sensing an intracorporeal ECG signal, as similar to the signal as defined by applicant (paragraph 16), since the sensor disclosed by the Brownlee et al. reference is sensing a signal out side of the heart but inside of the patient's body (Figure 1). Further, it would have been obvious to one having ordinary skill in the art at the time of the invention to include the a remote sensor as taught by Brownlee et al. for detecting intracorporeal ECG signals in a biventricular pacing system that uses feedback from sensed signals to efficiently operate the pacing system, such as the biventricular pacing system as taught by Lu, since a biventricular

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pacing system is a dual chamber pacing system that could utilize the enhanced sensing capabilities as taught by Brownlee et al. (col. 1 lines 32-39).

In regards to claim 12, Examiner takes the position that the pacemaker housing (4) which serves as an indifferent electrode (col. 2 lines 6-9), provides the same benefit and purpose as the electrode dot claimed by the Applicant, as a indifferent electrode (paragraph 34). Further, Applicant admits "electrode dots on a stimulator housing are generally known in the field of cardiac pacing;" therefore takes the position in the alternative, that it would have been obvious to one having ordinary skill in the art at the time of the invention to include in a biventricular system an electrode dot on the housing, since one of ordinary skill in the art would expect such an electrode to provide the same benefit for a biventricular pacing system that it is known for providing in other pacing systems.

2. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Examiner takes the position that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Brownlee et al. with the teachings of Lu, and vice versa, since both teach of cardiac

pacing devices that provide dual chamber stimulation that require sensing of cardiac signals for feedback to ensure optimal pacing treatment. Particularly, Examiner takes the position that it would have been obvious to one having ordinary skill in the art at the time of the invention to modify a biventricular system with a remote sensing electrode that provides enhanced cardiac signals sensing capabilities, as taught by Brownlee et al., since a biventricular pacemaker is a type of dual chamber pacemaker and the advantages of improved sensing capabilities is not limited to pacemakers that are not biventricular systems.

Claim Rejections - 35 USC § 103

3. Claims 1-6 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brownlee et al. (U.S. Patent No. 4,387,717) in view of Lu (U.S. Patent No. 6,697,673) as applied in the previous action of November 30, 2005, and above.

4. Claims 1-6 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu (U.S. Patent No. 6,697,673) as discussed in the previous Office Action of November 30, 2005 and above, and further in view of Brownlee et al. (U.S. Patent No. 4,387,717) as discussed in the previous Office Action of November 30, 2005, and above.

It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Lu with the teachings of Brownlee et al. Lu and Brownlee et al. both teach of cardiac stimulation devices that provide dual chamber stimulation, and thus teach of analogous arts. It would have been obvious to one having ordinary skill in the art to modify the teachings of Lu by including a sensing

electrode remote from the pacemaker housing and at a distance away from the heart, since it is known in the art to provide improved cardiac signal sensing capabilities, as taught by Brownlee et al. (col. 1 lines 32-39).

5. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brownlee et al. (U.S. Patent No. 4,387,717) in view of Lu (U.S. Patent No. 6,697,673) as applied to claims 1-6 and 10-13 above, and further in view of Van Dam et al. (U.S. Patent No. 6,671,549), as applied in the previous Office Action of November 30, 2005.

6. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu (U.S. Patent No. 6,697,673) in view of Brownlee et al. (U.S. Patent No. 4,387,717) as applied above to claims 1-6 and 10-13 above, and further in view of Van Dam et al. (U.S. Patent No. 6,697,673) as applied in the previous Office Action of November 30.

It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Lu and Brownlee et al. for the reasons discussed above, and to further combine the teachings of Van Dam et al. Lu, Brownlee et al. and Van Dam et al. all teach of cardiac stimulation devices that may provide dual chamber stimulation, and thus teach of analogous arts. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Lu to include the analyzing of the ST segment and positive and negative slopes/peaks as they may be indicative of heart problems and useful in determining whether capture has occurred. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Lu with the teachings of Brownlee et al. and Van Dam et al. to have the limitations of claims 7-9.

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7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brownlee et al. (U.S. Patent No. 4,387,717) in view of Lu (U.S. Patent No. 6,697,673) as applied to claims 1-6 and 10-13 above, and further in view of Bradley (U.S. Patent No. 6,810,284) as applied in the previous Office Action of November 30, 2005.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu (U.S. Patent No. 6,697,673) in view of Brownlee et al. (U.S. Patent No. 4,387,717) as applied above to claims 1-6 and 10-13 above, and further in view of Bradley (U.S. Patent No. 6,810,284) as applied in the previous Office Action of November 30, 2005.

It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Lu and Brownlee et al. for the reasons discussed above, and to further combine the teachings of Bradley. Lu, Brownlee et al. and Bradley all teach of cardiac stimulation devices that may provide dual chamber stimulation, and thus teach of analogous arts. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Lu to include the delivery of a backup pulse when loss of capture is detected, since it would be an added safety measure for the patient as taught by Bradley (col. 8 lines 5-7). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Lu with the teachings of Brownlee et al. and Bradley to have the limitations of claim 14.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Maarse (U.S. Patent No. 6,128,535), Struble (U.S. Patent No.

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6,148,234), Bradley (U.S. Patent No. 6,473,647), Stahmann et al. (U.S. Patent No. 6,496,586), Fishler (U.S. Patent No. 6,751,504), Florio et al. (U.S. 2001/0049542), Kroll (U.S. 2001/0049543), Maarse (WO 99/29368), Russie et al. (WO 01/74441).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lenwood Faulcon, Jr. whose telephone number is 571-272-6090. The examiner can normally be reached on Monday-Thursday from 9 to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela D. Sykes, can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lenwood Faulcon, Jr.



George Manuel

Primary Examiner